

Quality Assessment of Meteorological Data from CTBTO/IMS Radionuclide Stations

All radionuclide stations are equipped with meteorological sensors and transmit these data to the IDC. These data help to interpret radionuclide measurements, especially with respect to local influences. Data from selected stations are transmitted real-time to the World Meteorological Organisation (WMO). Meteorological measurements not being the primary mission of the IMS, their quality is not seen as a priority. However data can only be used if they are available and reliable. Therefore, data from DEP33 Schauinsland, a mountain station used in the first ATM Challenge, and JPP38 Takasaki, which is important for monitoring the DPRK test site, were investigated in detail. For the data quality at Schauinsland, several problems were found, most severe with relative humidity which are of no useful value at this station. Data at Takasaki were found to be of better quality. All available data from the network were then screened with respect to availability and climatological limits. They show in general problematic quality, especially for relative humidity and precipitation. Station height data are missing for a majority of stations. In order to achieve satisfactory quality, there is a need for regular inspections and maintenance of the equipment and automatic quality checks within the SOH procedures.

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